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ABSTRACT

Two tests were administered to 87 students at the third through fifth levels of English as a second language (with emphasis on scientific education) at the Center for the Teaching of Foreign Languages of the Autonomous Metropolitan University. Test I consisted of 25 multiple choice and true/false reading comprehension questions based on a scientific text of 400 words. Test II consisted of multiple choice questions based on short texts chosen for the difficulties they presented with regard to vocabulary, rhetorical functions, syntactic complexity, and contextual reference. The scores of the two tests were compared. Although some correlation was found between comprehension and the various points of supposed linguistic difficulty, the correlation was less marked than might have been expected if these points really were causes of difficulty in reading comprehension. The results indicate that a person who understands a text well will also have little or no difficulty with vocabulary, textual rhetoric, sentence complexity, or contextual reference. However, the converse is not true. The study thus fails to find convincing empirical evidence in support of the inclusion of certain types of language proficiency exercises in courses aimed at improving reading comprehension. The tests are appended. (JB)

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Research and Development Unit

Report No. 8

DIFFICULTIES WHICH STUDENTS ENCOUNTER WHEN READING TEXTS IN ENGLISH

(This report is a revised version of a paper given at the Mextesol National Conference in Monterrey, October 1977).

U S DEPARTMENT OF HEALTH, EDUCATION & WELFARE
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DIFFICULTIES WHICH STUDENTS ENCOUNTER WHEN READING TEXTS IN ENGLISH

Many students of the UNAM are faced with an urgent need to handle academic texts in English and in order to help them meet this need, the UID has been producing a series of tailor-made ESP courses in Economics, Law, Architecture and Veterinary Medicine. To date, the courses produced have had to attempt to equip students with basic reading skills in a very limited amount of time - no longer than an academic semester - and have had to cater for groups of students heterogeneous in their levels of proficiency in English. There is thus an urgent and continuing need to decide what constitutes difficulty in reading comprehension of English texts, for non-native speakers of English, in order to help the materials writers to decide upon a suitable syllabus, capable of furnishing the students with the skills they need, in the shortest possible time.

There are numerous textbooks now on the market which aim to help students understand English texts either of a "general" type or pertaining to a specific field such as Engineering, Medicine, Biology. Some of these mix all four skills and others claim to aim exclusively at reading comprehension. The following exercises found in such books are often used in Mexico with the objective of increasing reading comprehension skills even if this may not be the exclusive aim of the course. For examples of these exercises, see Appendix A.

1. Vocabulary
2. Rephrasing
3. Rhetorical Functions
4. Notions
5. Connectors
6. Structural points
7. Contextual Reference
8. Sentence Complexity

The assumption of the authors and teachers using these exercises seems to be that these elements may present some difficulty to non-native speakers when reading texts in English and by giving them exercises of this type their comprehension will improve. However, the relationship between being able to handle exercises of this type and the ability to understand texts in English is far from being a proven fact.

How do authors decide what kinds of exercises to include in a textbook? It seems that to a large extent it depends on intuition and personal individual experience and interest. There may also be problems existing in the comprehension of texts for which a variety of exercises are difficult to write. It seems almost certain that most materials already available and those being written are not based on any empirical evidence of the nature of the relationship between the exercises they contain and reading comprehension.

This situation makes it imperative that we raise a number of questions:

i) Do these exercises reflect the real difficulties which students find inherent in reading English texts?

ii) Is it the case that being able to do these exercises a student is also able to comprehend a text in English?

iii) Is there a causal relationship between the two? Does doing these exercises improve the student's reading comprehension?

iv) Is it important which type of text we are referring to? Do all texts present the same type of difficulty? What is an easy or a difficult text? What effect does different content have? In what ways might the author's purpose in writing the text come across? What exercises are best suited to which types of texts?

v) Is it important which group of students we are referring to? Is the level of "general English" important? If so, is it always important to the same extent? Is there a basic minimum beyond which the general level in the language begins to diminish in its effect on the level of reading comprehension ability?

vi) Which students are helped by which exercises and in which order?

vii) Does the student studying Engineering reach a better level of comprehension following the same type of reading exercises as a student studying Economics?

viii) What should the syllabus of a course designed to give Psychology students the necessary skills to make the most of their academic reading in English look like? In what ways might it be the same or different from a syllabus for students of physics?

Clearly to answer all or even some of these questions will involve the setting up of a series of major research projects over a number of years. Nevertheless, the first step in beginning to answer some of them seems to be to go back and question the assumption that the exercises mentioned above are related to reading comprehension. If they are related, to what extent?

The aim of this frankly exploratory study is to look for empirical evidence that might support the intuitive assumptions materials writers, including ourselves, have made about causes of comprehension difficulty, and about the type of exercises most useful in improving students' ability to understand text.

Procedure

An attempt was made to compare ability to understand a text, with the ability to do certain exercises which are likely to be included in a course aimed at improving students' comprehension of the text. It would be expected that if these exercises really do aid ability to comprehend text, there would be a reasonably close relationship between ability to do the exercises, and comprehension of the text, and, vice versa, between lack of ability to do the exercises and lack of understanding of the text..

Two tests were administered to 87 students of 3rd, 4th and 5th levels of the Centro de Enseñanza de Lenguas extranjeras. (Appendix B)

Test I consisted of a general text of 400 words in length and twenty-five questions of the multiple choice and True/False types. These were intended to measure the students' general overall understanding of the text, some specific main points, some essential details and his ability to infer information that was contained in the text though not explicity stated.

Test II consisted of a language test based on what four members of the Research and Development Unit considered to be points of linguistic difficulty in the text, which might well have been included in a course teaching students to handle such a text. These could be classified into 4 major areas:

1) Vocabulary
2) Rhetorical Functions
3) Syntactic Complexity
4) Contextual Reference

Examples of questions making up the language test include:

Part I Vocabulary

Which of the following could be called a scrapbook?

a) A collection of newspaper clippings
b) A collection of butterflies
c) A collection of historical documents

(The lexical items tested were, of course, to be found in the text whose comprehension was also being tested).

Part II Rhetorical Functions

Eg. Señale la opción que mejor describa la función de la frase que podría esperarse a continuación de cada una de las frases dadas.

There are a number of problems when travelling by train such as...
a) una definición
b) algunos ejemplos
c) una expresión sumaria de lo anterior
d) una clasificación

Part III Syntactic Complexity

De acuerdo con el texto que sigue, conteste las preguntas que se presentan a continuación.

Had it not been for bad weather and John's old car, Mary and Jane might have been able to arrive at their grandmother's before dark.

Who or what is this text about?
a) the weather
b) John's car
c) Mary and Jane
d) Their grandmother's

Part IV Contextual Reference

During the last week of May some of the neighborhood children went walking in the hills in search of berries. This is the season for it, you know, Yet in spite of there being five of them looking, after three hours only a few had been found, so they gave up and came home. Somebody must have been there before them.

In line 5 "them" refers to: a) other people
b) berries
c) hills
d) children

After the two tests had been marked an item analysis was carried out and invalid items removed. The scores on the comprehension were then compared with those on the language test to see if there was any relationship between ability in reading comprehension and proficiency in the various linguistic points which had been identified as conceivably causing difficulties to readers. In other words, the following questions were investigated:

1) Is it the case that lack of ability to identify anaphoric referents leads to lack in comprehension of a text?

2) Do students with a weak vocabulary perform worse on a comprehension test than those with a good recognition vocabulary?

3) Are students who can identify the constituent points of a sentence better able to understand texts than those who cannot?

4) And how relevant to text comprehension is the ability to recognize the rhetorical structure of a text?

Results

TABLE 1

A Comparison of the Comprehension and Language Tests

TESTS	rho=
Comprehension and Total Language Test	+ 0.60
Comprehension and Part I (Vocabulary)	+ 0.47
Comprehension and Part II (Rhetoric)	+ 0.38
Comprehension and Part III (Sentence Complexity)	+ 0.37
Comprehension and Part IV (Contextual Reference)	+ 0.45

All coefficients significant at the 1% level

Table 1 shows the results of a rank correlation. The following points can be noted:

1) There is an association between ability in reading comprehension and language ability
2) A range of measures of language ability seems to give a better prediction than any one measure in particular.
3) The supposed points of linguistic difficulty are positively related to comprehension ability, but the relationship is very far from being close, and prediction of comprehension ability on the basis of ability to perform on anyone of these points would be very difficult.
4) The abilities to handle rhetorical functions and pick out the constituent parts of a sentence appear to have less relation to comprehension than knowledge of vocabulary or the ability to recognize referents within the text.

In view of the low predictability of comprehension from performance on the linguistic tasks, a somewhat coarser analysis was carried out, in which the question was asked: do students who perform well/badly on a specific task measure also perform well/badly on the comprehension measure. To this end, contingency tables were drawn up for each of the parts of the language test, and the total test (Table 2). The Chi square test revealed significant associations in every case.
(In the case of part IV of the language test, the scores were so bunched that it was impossible to separate out those students with scores more than one S.D. above the mean.)

TABLE 2

Notes

+ = One or more standard deviation above the mean.
- = One or more standard deviation below the mean.
Above $\bar{X}$ = The mean or above
Below $\bar{X}$ = Below the mean

Language Test

	Comprehension Above $\bar{X}$	Comprehension Below $\bar{X}$
+	15	4
-	0	16

χ^2 = 22.104

Part I (Vocabulary)

	Comprehension Above $\bar{X}$	Comprehension Below $\bar{X}$
+	16	5
-	2	15

χ^2 = 15.641

Part II (Rhetoric)

	Comprehension Above $\bar{X}$	Comprehension Below $\bar{X}$
+	14	10
-	1	13

χ^2 = 9.698

Part III (Sentence Complexity)

	Comprehension Above $\bar{X}$	Comprehension Below $\bar{X}$
+	7	0
-	2	11

χ^2 = 13.162

Part IV (Contextual Reference)

	Comprehension Above $\bar{X}$	Comprehension Below $\bar{X}$
-	1	12

All Chi Squares are significant at the 1% level.

Taking the language test first, what kind of predictions might one be able to make from knowing a student's score on the Language test and its various parts?

i) Obtaining high scores on the language test has an apparently clear association with high scores on the comprehension test.

ii) If the student did well on the vocabulary section (Part I) he was likely also to have high scores on the Comprehension test. Equally, if his vocabulary score was low his comprehension was likely to be weak.

iii) The same appears to hold for the sentence complexity scores (Part III)

iv) If the student is poor at identifying the contextual reference (Part IV) he is also likely to be poor at comprehension.

v) The ability to identify rhetorical functions does not show such clear distinctions.

Table 3 presents further contingency tables where the comprehension test scores are taken as the basis for prediction of the language test scores.

TABLE 3

Notes

Com. + = One standard deviation or more above the mean on the Comprehension Test
Com. - = One standard deviation or more below the mean on the Comprehension Test
Above $\bar{X}$ = The mean or above
Below $\bar{X}$ = Below the mean

Language Test

	Above $\bar{X}$	Below $\bar{X}$	
Comp. +	13	2	
Comp. -	3	11	T = 29

X^2 = 12.461

Part I (Vocabulary)

	Above $\bar{X}$	Below $\bar{X}$	
Comp. +	13	2	
Comp. -	5	9	T = 29

X^2 = 7.985

Part II (Rhetoric)

	Above $\bar{X}$	Below $\bar{X}$	
Comp. +	15	0	
Comp. -	7	7	T = 29

X^2 = 9.886

Part III (Sentence Complexity)

	Above $\bar{X}$	Below $\bar{X}$	
Comp. +	12	3	
Comp. -	6	8	T = 29

X^2 = 4.234

Part IV (Contextual Reference)

	Above $\bar{X}$	Below $\bar{X}$	
Comp. +	13	2	
Comp. -	5	9	T = 29

X^2 = 7.985

All Chi Squares significant at 5% level

The results of Table 3 show that in general being good at comprehension seems to be accompanied by an ability to perform well on the language test. This is also true for the individual parts of the language test, since good comprehension ability results in above average performance on Vocabulary, Rhetoric, Sentence Complexity and Contextual Reference. However, being weak on comprehension does not seem to hold the same kind of predictability. These results show that some students who were in the lowest group on the comprehension test managed to obtain mean scores or above on the various parts of the language test.

Conclusion

Although some correlation was found between comprehension and the various points of supposed linguistic difficulty, it was lower than might have been expected if these points really were causes of difficulty in reading comprehension. Obviously there is more to comprehension than ability to handle either one or all of the points tested. This, of course, need not surprise us as readers, but should give us cause for concern as materials writers, typically producing exercises aimed at improving comprehension similar to the parts of the language test used in this study. The results of the study indicate that a person who understands text well will also have little or no difficulty with vocabulary, textual rhetoric, sentence complexity or contextual reference. However, the converse is not true, since students who are weak in comprehension are equally likely to be good at the linguistic tasks sampled as they are to be poor at them. Therefore, these results do not give us grounds to say that if a students' comprehension ability is weak, he needs a good dosage of exercises in vocabulary, sentence complexity, rhetorical functions and contextual reference.

This study has failed to find convincing empirical support for the inclusion of certain types of exercises in courses aimed at improving reading comprehension. We need to ask ourselves seriously if these exercises are in fact helping students to overcome the difficulties they encounter when trying to handle their academic texts in English. Of course, this is a merely exploratory study intended to raise questions rather than to supply answers. Its value seems to us to be that it emphasizes the need to question our assumptions about linguistic difficulty and the means of improving students' abilities to handle their academic texts. Clearly other ways of investigating the whole area need to be devised and implemented in order to corroborate and extend the findings of this study. Nevertheless, until we have more basic information it does not seem that we have grounds for doing linguistic exercises

supposedly relating to comprehension. There is a clear and urgent need for us to define the linguistic difficulties of our students, and to base our definitions upon empirical evidence.

APPEDDIX A

Examples of exercises traditionally thought to improve reading compre--hension.

1. Vocabulary

Bleak
Which of these words does not go with 'bleak'?

a) bare
b) gay
c) cold
d) dreary

(Reference: "Beyond Words", Alan Maley and Alan Duff, p. 19)

2. Rephrasing

The first disorder in ruptured egg yolks, a sporadic condition which causes death in laying hens. This disturbance is common in flighty pullets. In this condition, the yolk-filled ova rupture into the abdominal cavity. Yolk material then covers the viscera and often results in peritonitis. It is possible for rupture to be accompanied by severe hemorrhage. However, it is not certain whether the former or the latter is the cause of deaths. The condition is frequently associated with chronic Pasteurella multocida or Escherichia coli infection.

Read the following sentences. Look at the phrases underlined and find the phrases with the equivalent meaning contained in the text above.

a) Ruptured egg yolks is a condition which can cause death in <u>hens kept for egg production</u>.

b) Ruptured egg yolks is a frequent condition in <u>hens which have a tendency to fly</u>.

c) <u>Rupture may be accompained by serious bleeding</u>.

(Reference: "Inglés para Objetivos Específicos, Lectura de Comprensión", Facultad de Medicina Veterinaria y Zootecnia y Unidad de Investigación y Desarrollo, CELE, UNAM, p. 64 and 66)

3. Rhetoric

Making definitions

Study the following diagram:

(a) a scalar quantity **is a** (b) physical quantity

which

(c) has magnitude but not direction

We can make a classifying sentence about a scalar quantity by joining (a) and (b):

A scalar quantity is a physical quantity.

We can then expand the sentence by including (c):

A scalar quantity is a physical quantity which has magnitude but not direction.

The expanded sentence defines a scalar quantity. It is a definition. Now write as many definitions as you can using the following table.

a	b	c
a vector quantity		can extend a body
a load		has magnitude and direction
a tensile force	straight line	represents a vector quantity
a linear dimension	force	is a product of basic units
a vector	unit	can be measured in a straight line
a compressive force	dimension	can stretch or compress a body
a derived unit	physical quantity	can compress a body
friction		opposes motion

(Reference: "English in Focus, English in Mechanical Engineering", Eric H. Glendinning, p. 17-18)

4. Notions

Read this:

Minerals in rocks sometimes decompose to form other minerals. There are four principal processes - oxidation, solution, carbonation and hydration.

Now look at this:

Oxygen (O_2)

Iron

Iron (Fe) Silicon (Si)

Aluminium (Al)

Haematite (Fe_2O_3) Magnetite (Fe_3O_4) Sodium (Na) Calcium (Ca) Potassium (K)

Albite ($NaAl.Si_3O_8$) Anorthite ($CaAl_2.Si_3O_8$) Feldspar ($KAl.Si_3O_8$)

Look at these examples:

Iron combines with oxygen to form haematite.
Thus the formation of haematite results from the oxidation of iron.
Albite forms as a result of the oxidation of silicon, aluminium and sodium.

Now complete these statements:

a) Iron also combines with oxygen to form ...
b) The formation of anorthite results from the oxidation of ...
... and ...
c) Feldspar forms as a result of ...

(Reference: "Nucleus, English for Science and Technology, Geology", Colin Barron / Ian Stewart, p. 58)

5. a) Connectors

Sentence building

Join the following groups of sentences to make eleven longer sentences, using the connecting words printed at the beginning of each group. You may omit words and make whatever changes you think are necessary in the word order and punctuation of the sentences.

EXAMPLE

BECAUSE/AND/HOWEVER
Plastics are used widely in engineering.
They are cheap.
They have a resistance to atmospheric corrosion.
Plastics are not particularly strong.
= Plastics are used widely in engineering because they are cheap and have a resistance to atmospheric corrosion; however they are not particularly strong.

1. AND
There are two types of plastics.
Thermoplastics are plastics.
Thermosets are plastics.

2. AND/WHEREAS/AND
Thermoplastics will soften when heated.
Thermoplastics will harden when cooled.
Thermosets set on heating.
Thermosets will not remelt.

(Reference: "English in Focus, English in Mechanical Engineering", Eric H. Glendinning, p. 11)

5. b) Connectors and Notions

Observations: There are differences between individual members of a species.

Inductions: Some individuals are better adapted to their environment than others.

The better adapted individuals will tend to live longer.

They will tend to produce more offspring.

The offspring will tend to inherit some of the beneficial characteristics of their parents.

These offspring will tend to live longer.

The population will tend to change gradually as more beneficial characteristics enter it.

The change in the population will tend to produce a new species.

Now introduce the sentences above with phrases chosen from the following:

Consequently, This suggests that ... Moreover, As a result,

It is also observed that ... Eventually, Thus. Therefore.

6. Structural Points

Look at the following examples of active and passive sentences:

Active	Passive
We suspend a 1 kg mass from a light bar.	A 1 kg mass is suspended from a light bar.
We measured the distance between the mass and the fulcrum.	The distance between the mass and the fulcrum was measured.
We may calculate the moment of the force in two ways.	The moment of the force may be calculated in two ways.

Now rewrite each of the following sentences in the passive.

1. If we place a smooth roller on an inclined plane, it will run down the plane.
2. Two other forces act on the roller.
3. We can apply this force in any direction providing one component acts up the plane.
4. We call the third force the normal reaction -R.
5. We can therefore draw a triangle of forces for the system.
6. The diagram shows this force -P- acting parallel to the plane. (In the diagram, this force ...)
7. To keep the roller in equilibrium we must apply a force to it. (A force ...)

(Reference: "English in Focus, English in Mechanical Engineering", Eric H. Glendinning, p. 21)

7. Contextual Reference

THE SOLAR HOUSE

(1) The core of this resort and of its energy conservation system is an atrium facing south. (2) It captures solar heat through a glass roof and retains and radiates it through a specially paved floor. (3) The atrium's three interior sliding glass walls open to the inside of the resort. (4) At night, automatic levers close to protect the atrium roof.

(5) The house needs to conserve the energy captured. (6) Therefore, it has heat-insulating materials on the walls. (7) Doors have wind screens. (8) Special metal plates distribute the heat to the rooms.

Exercise:

Fill in the blanks.

1. In sentence (1), this resort refers to: _____

2. In sentence (1), its refers to: _____

3. In sentence (2), the first it refers to: _____

4. In sentence (2), the second it refers to: _____

5. In sentence (6), it refers to: _____

(Reference: "Basic English for Academic Study", Unit IV, C.A.D. Extension Material, p. 1 and 2)

8. Sentence Complexity

Exercise

Read the following pairs of sentences slowly; note how the structure of the first sentence of each pair is repeated in the second.

1 a) He was so fat that he could not see his feet.

b) The plan he put forward was so difficult for his assistants, even the most experienced, to understand and put into action, that there was little chance of its having any material result.

2 a) I regard her as one of my best friends.

b) Luke Parslow was regarded by practically all the people who knew him, including a number who were well qualified to judge such matters, as one of the most promising young lawyers in the county.

3 a) The more I learn, the more I forget.

b) The more often I saw her, in that summer which was remarkable in so many different and exciting ways, and which will remain in my memory long after later summers have faded from my mind, the more I realised how fascinated I was by her exotic, mysterious and intriguing personality.

(Reference: "Inside Meaning, Proficiency Reading Comprehension", Michael Swan, p. 47)

APPENDIX B

1) Test I

CELE / UNAM

UNIDAD DE INVESTIGACION

EXAMEN EXPERIMENTAL DE COMPRENSION DE LECTURAS EN INGLES

Después de leer el texto que sigue, contesta las preguntas a continuación. Haz tus respuestas en la hoja de respuestas. Tienes aproximadamente una hora para resolver el examen, aunque posiblemente termines en menos tiempo.

Muchas gracias por tu colaboración.

Nombre: _____

Grupo: _____ Nivel: _____

EXOBIOLOGY

Biology has lately given rise to a new discipline: exobiology, the study of extraterrestrial life. Ever since 1959, when analysis of a piece of meteor substance showed traces of organic compounds, a controversy has raged as to whether these compounds came into the atmosphere with the meteorite or whether they originate on earth. The dispute has never been satisfactorily resolved, and discussions about life elsewhere have had to continue to be based on inference and conjecture. Astronomical calculations based on the fraction of stars with planets, the number of these planets suitable for life, the fraction of such suitable planets on which life actually appears, and the number of these on which life reaches consciousness and the desire to communicate arrive at the conclusion that perhaps one in one hundred thousand stars has an advanced society in orbit around it. That means that there could be as many as a million intelligent life forms in our galaxy alone. But our success in establishing contact with any of them depends also on the longevity of each of us. It is possible that the acquisition of nuclear technology is a consequence that no species can control for long, and that all the beings that do manage to get this far only succeed in destroying themselves with it rather quickly.

Assuming that they do not succumb, the chances seem to be quite high that sooner or later we will meet one or more of them. Erich von Daniken thinks that we are one of them. He has collected a scrapbook of loose ends in archaeology and anthropology, such as the map found in Istanbul that shows the continents as they would look from space, distorted by the curvature of the globe; an iron pillar in India that does not rust; patterns on the plains of Peru that can be appreciated only from the air, descriptions in sacred manuscripts of gods coming down to earth in chariots with wheels of fire; and ancient paintings and etchings that portray figures wearing what look like space helmets. From all this he deduces that God was an astronaut and that we are partly the product of an extraterrestrial intelligence. It is a provocative idea, but as a biologist with a belief in our own still largely unexploited ability, I find it unattractive and unnecessary to give credit for our achievements to some transient aliens.

CONPREHENSION QUESTIONS EXOBIOLOGY

1. Exobiology is most completely described as the study of
   a) life from other planets
   b) compounds from other planets
   c) planets from other galaxies
   d) meteorites from outer space

2. From what the author of this text says, we can infer that he is:
   a) a biologist
   b) an exobiologist
   c) an anthropologist
   d) a philosopher

3. A meteor was found in 1959 containing organic matter. Since then the origin of the organic matter has been generally:
   a) attributed to outer space
   b) attributed to the earth
   c) determined by general agreement
   d) a matter of dispute

4. a) A lot of
   b) All
   c) Very few stars have planets
   d) Some

5. According to the text, astronomical calculations suggest that life may exist:
   a) on other stars
   b) on other planets
   c) on other meteors
   d) in orbit around the Sun

6. "they"in line 17 refers to
   a) men on earth
   b) all beings
   c) extraterrestrial beings
   d) the chances

7. The text states that nuclear technology possibly:
   a) will help us to use nuclear power peacefully.
   b) will soon escape control.
   c) will mean the end of some species.
   d) will provide enough power for man's future needs.

8. Von Daniken, according to the text, believes that:
   a) we are extraterrestrial beings
   b) we are partly the product of an extraterrestrial intelligence
   c) we are astronauts
   d) we are [illegible] strictly from species that evolved on the Earth

9. The author of this text believes von Daniken's entire work is:
   a) unattractive and unnecessary
   b) well-documented
   c) thought-provoking
   d) totally ill-conceived

10. According to the text, who advocates that extraterrestrial life has established contact with men on the Earth?
   a) von Daniken
   b) the author
   c) all religions
   d) astronomers

11. How many extraterrestrial life forms are thought possible in our galaxy?
    a) one
    b) a hundred thousand
    c) one in a hundred thousand
    d) a million

12. In the text, the evidence for extraterrestrial life is presented in the form of:
    a) conjecture
    b) observed fact
    c) a mixture of fact and inference
    d) scientific observation

13. The text states the possibility that extraterrestrial life:
    a) has nuclear technology at present.
    b) is intelligent
    c) is only to be found in our galaxy
    d) will surely be destroyed by nuclear reactors

14. In the whole text, a theory of evolution is:
    a) absent
    b) assumed
    c) rejected
    d) discredited

15. Which of the following constitutes a critical point in our development, according to the author?
    a) the acquisition of nuclear technology
    b) our contact with extraterrestrial life
    c) our survival in spite of the competition for food
    d) our unexploited abilities

16. The discussion over the origin of the organic matter found on a fallen meteorite is based on:
    a) observation
    b) astronomical calculations
    c) a raging controversy
    d) inference and conjecture

17. Exobiology is a new discipline which originated in the field of:
    a) astronomy
    b) anthropology
    c) biology
    d) archaeology

18. The text mentions some examples of possible contact with extraterrestrial life forms. These examples:
    a) support the author's view
    b) support von Daniken's view
    c) show that man's achievements are independent of outside interference
    d) deny man's contact with beings from outer space

19. According to the author, Erich von Daniken's evidence:
    a) connects features of different parts of the world
    b) is a collection of unconnected but interesting observations
    c) proves that extraterrestrial beings have visited earth before
    d) proves that God was an astronaut

20. The author feels that to give extraterrestrial life forms credit for our achievements is:
    a) provocative
    b) unnecessary
    c) unacceptable
    d) quite acceptable

21. According to the text, before 1959, discussions about life elsewhere were:
    a) based on inference and conjecture
    b) non-controversial
    c) satisfactorily resolved
    d) based on traces of organic compounds

22. The number of planets with life forms with consciousness
    a) is astronomical
    b) is more than of planets with an advanced society
    c) is less than that of planets suitable for life
    d) is a fraction

23. In our galaxy there are:
    a) 1,000,000
    b) 100,000 stars
    c) 100,000,000,000
    d) 10,000,000

24. Our longevity depends on
    a) establishing contact with other worlds
    b) destroying ourselves rather quickly
    c) controlling other species for a long time
    d) controlling nuclear technology

25. The connection between the Indian iron pillar and figures wearing space helmets is that:
    a) both can be seen from the air
    b) both suggest the presence of extraterrestrial life forms
    c) neither the pillar nor the helmets rust
    d) both relate not only to archaeology but also to anthropology

APPENDIX B

2) Test II

LANGUAGE TEST August, 1977.

Name: _____ Level: _____

Teacher: _____

Part I Vocabulary.

En las preguntas que siguen, señale cuál de las opciones ofrecidas es la que más se asemeja a la palabra(s) subrayada.

1. beings (there are no beings on that planet)
   a) plant life
   b) human life
   c) forms of life

2. traces (we found traces of life)
   a) prints
   b) signs
   c) lines

3. elsewhere (They don't sell black belts here, we'll have to look elsewhere)
   a) over there
   b) some other place
   c) somewhere

4. suitable (we are looking for an actor who would be suitable for the part of Hamlet in our new production of the play)
   a) appropriate
   b) the right size
   c) clothed

5. portrays (the picture portrays a woman in black)
   a) carries
   b) imagines
   c) represents

6. whether (John asked Sylvia whether she would go out with him or not)
   a) if
   b) when
   c) that

7. In our house alone there are ten mice.
   There are mice: a) only in our house
   b) probably in many houses
   c) only in other houses
   d) in our house; I counted them

8. Rust is what occurs when water and ir come into contact with:
   a) steel
   b) wood
   c) gold

9. Which of the following could be called a scrapbook?
   a) a collection of newspaper clippings
   b) a collection of butterflies
   c) a collection of historical documents

10. longevity is:
   a) length of an object
   b) length of life
   c) length of a wave

11. loose ends are:
   a) documents
   b) strings
   c) bits and pieces

12. etchings are:
   a) prints
   b) sides
   c) lists

13. chariots are:
   a) space-ships
   b) two-wheeled wagons
   c) automobiles

14. Success is:
   a) an event
   b) a point in time
   c) a positive result

16. rather soon is:
    a) pretty soon
    b) very soon
    c) preferably soon

17. iron is:
    a) humor
    b) a magnet
    c) a metal

Seleccione la opción que podría substituir por las palabras subrayadas, pero conservando lo más posible el significado original de la frase.

18. Economic inequality can give rise to political disturbance.
    a) set the preconditions and help cause
    b) rapidly increase
    c) force the growth of
    d) exagerate the effects of

19. The cholera epidemic raged for almost 6 months.
    a) continued violently
    b) steadily grew worse and worse
    c) gradually decreased
    d) caused some discomfort

20. Assuming that everyone comes, we'll need 2 kilos of ice cream
    a) I knew that
    b) If
    c) Since
    d) Because

21. They won't be here for long
    a) many hours
    b) a few minutes
    c) more time
    d) less time

22. "They may be in my office" is:
    a) permiso
    b) solicitud
    c) una posibilidad
    d) una orden

23. "Thus, 300 people wrote their names at the bottom of the letter of protest"
    a) una conclusión
    b) una introducción
    c) una posibilidad
    d) una clasificación

Señale la opción que mejor describa la función de la frase que podría esperarse a continuación de cada una de las frases dadas.

24. Modern international relations and advanced technology are combined in the system of "bugging"...
    a) una expresión de la causa
    b) una expresión de los efectos
    c) una definición
    d) una generalización

25. There are a number of problems when travelling by train such as ...
    a) una definición
    b) algunos ejemplos
    c) una expresión sumaria de lo anterior
    d) una clasificación

26. Señale la opción que mejor describe la <u>función</u> de cada frase.

1. The duckbilled platypus and the kangaroo are both marsupials.	a) definición
2. Camels are often very agressive animals.	b) instrucción
3. A "cue" is a stick which is used to hit the ball in billiards.	c) generalización
4. If all this is true then our chances of survival are very few.	d) descripción de un proceso
5. First the water is brought to boiling point then the egg is placed in water and left for 4½ minutes.	e) conclusión
6. Turn right at the end of the road.	f) clasificación

Señale la opción de la oración que lógicamente seguiría a la oración inicial en un texto.

27. There are approximately 100,000 students studying at C.U.
    a) The library has some famous murals
    b) That means a large number of studying facilities are required
    c) Therefore C.U. stands for Ciudad Universitaria
    d) It is now time to look at the University

28. Fidel Castro was interviewed for ABC television.
    a) New T.V. licences cost $20
    b) That means 50 minutes
    c) He was asked a lot of tricky questions
    d) Therefore Cuba had a revolution

29. There are still a few unpopulated regions in the world today such as some desert areas of Australia and Africa, ...
    a) 10 million people in New York,...
    b) Crowded cities in Europe, ...
    c) a greater number than one might think in the Amazon region, ...
    d) some extremely cold regions near the North and South Poles, ...

Parte III

De acuerdo con el texto que sigue, conteste las preguntas que se presentan a continuación.

It has never seemed to me to be a good idea, but the government, whether the people are conscious of it or not, always spends what to most people would seem to be an enormous amount of money when the president entertains visiting representatives from abroad.

30. Who or what is this text about?
    a) the people
    b) most people
    c) the government
    d) the president

31. Who is visiting?
    a) the president
    b) the government

32. The amount of money spent seems enormous to:
    a) the government
    b) the president
    c) some visitors
    d) most people

Señale la opción más apropiada.

33. Had it not been for the bad weather and John's old car, Mary and Jane might have been able to arrive at their grandmother's before dark.
    Who or what is this text about?
    a) the weather
    b) John's car
    c) Mary and Jane
    d) their grandmother's

34. With 350,000 people lining the streets and shouting, any politician, if he had any sensitivity at all would have been dist: 'ed, at least inside, even if tradition wouldn't allow him to show it.
    What or who does the disturbance affect?
    a) any politician
    b) tradition
    c) 350,000 people
    d) streets

35. I know they are rare but those beautiful tiny bright blue flowers with poi:ted petals and delicate brown and yellow centres are certainly worth looking for and carefully pressing to be included in pictures which the old folks love.
    What are worth looking for?
    a) rare flowers
    b) flowers
    c) beautiful tiny bright blue flowers
    d) those beautiful tiny, bright blue flowers with pointed petals and delicate brown and yellow centres

During the last week of May some of the neighborhood children went walking

36. In line 1, 'some' refers to:
    a) children
    b) hills
    c) berries
    d) neighborhoods

37. What is the season for berries?
    a) winter
    b) spring
    c) autumn
    d) summer

38. In line 2, "it" refers to:
    a) walking in the hills
    b) playing with children
    c) picking berries
    d) looking for other children

39. In line 3/4, "a few" refers to:
    a) hills
    b) berries
    c) children
    d) hours

40. In line 5, "them" refers to:
    a) other people
    b) berries
    c) hills
    d) children